INTEGRATED DEEPWATER SYSTEM (IDS)

17 November 2004

CAPT. Douglas Russell

Homeland Security

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Maritime Challenges Have Changed

So Must The Federal Response…

Asymmetric warfare waged by rogue states or international terrorists, drug trafficking and illegal migration, and degradation of the marine environment—will likely intensify in tomorrow's increasingly interconnected world.

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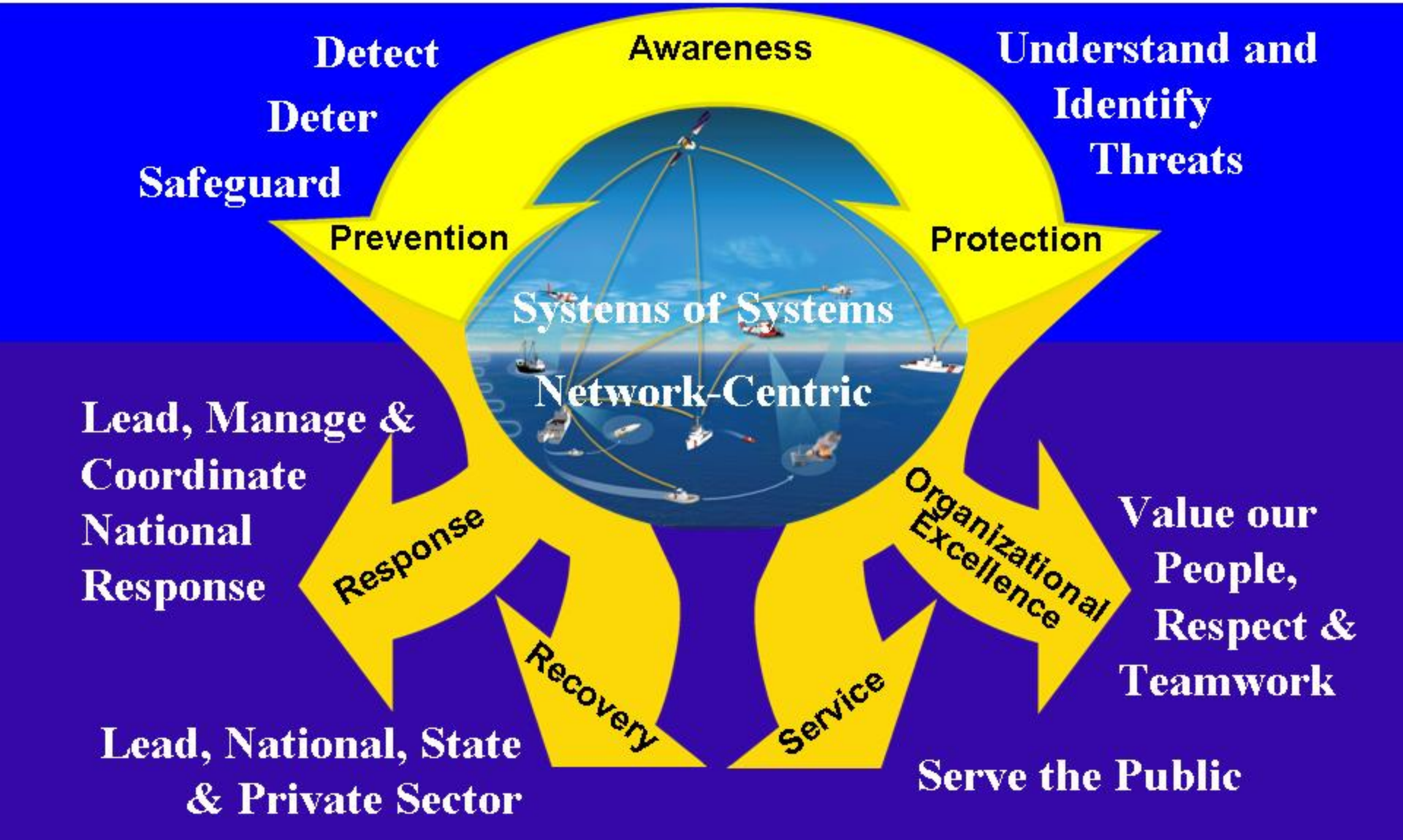
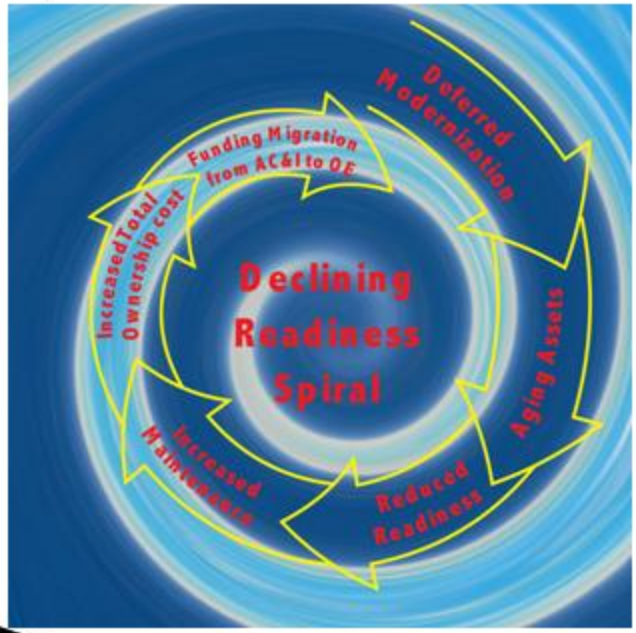
DHS Strategic Plan



Current Coast Guard Capabilities

The average age of our Deepwater cutters is 30...The Coast Guard fleet of High and Medium Endurance Cutters is older than 37 of the 39 (naval) fleets worldwide...



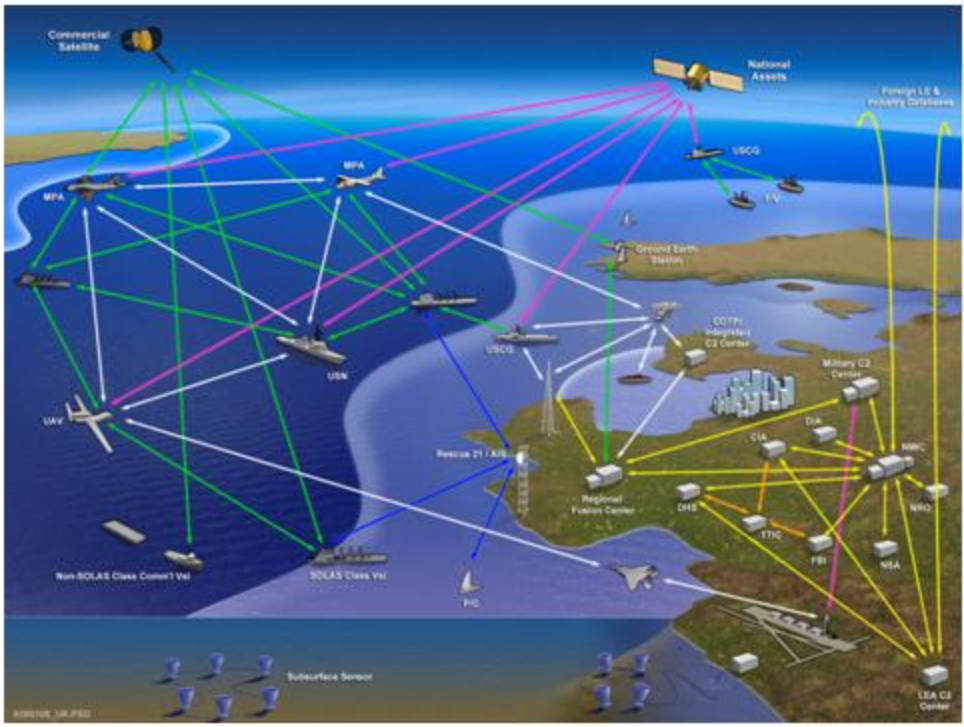
Year First Commissioned

Expiration of Planned Service Life

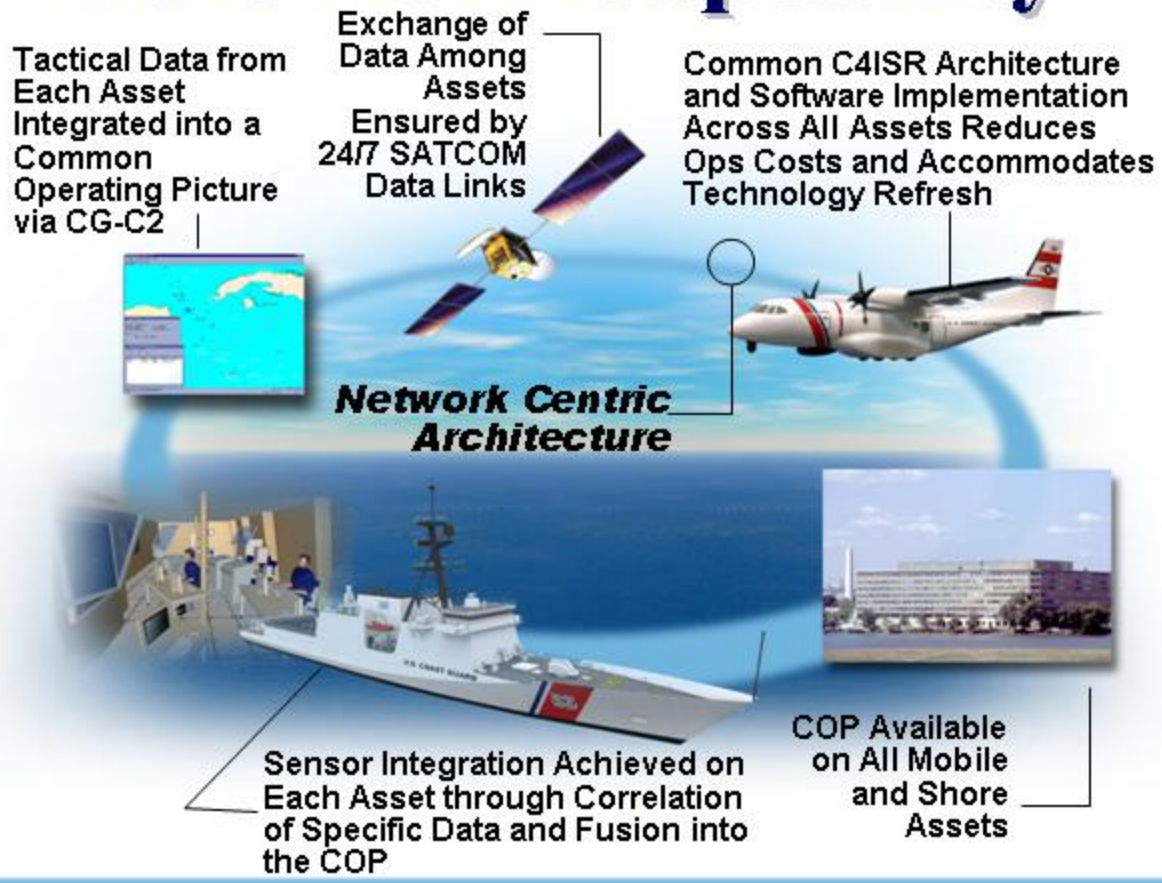
System of Systems Solution

Maritime Domain Awareness

- Expanding awareness of activities occurring in the maritime domain is critical to enhancing our performance across all mission areas.
- Identify and understand threats, and disseminate timely information to our operational commanders and our homeland security partners
- Respond to terrorist attacks, drug smuggling, illegal migration, distressed boaters, or illegal fishing



The C4ISR Capability



Capability Improvements

- Common Command and Control Systems is Fully Integrated With All Sensors, Communications, and Legacy Interfaces
- Interoperability and Maritime Domain Awareness Established by IDS Assets and National Sources
- Imbedded Technical Refresh to Prevent Future Obsolescence

Early Increased Situational Awareness, Surveillance, and Command is Provided through a Common Operating Picture to Answer Homeland Security Requirements

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System of Systems Solution - Assets

Current System:

91 Ships

206 Aircraft

Associated C4ISR

Legacy Shore C2

Aging Support Infrastructure

Added Capabilities:

System of Systems approach

Improved operating effectiveness while reducing total ownership cost (TOC)

Fully interoperable platforms

Capability based contracting model

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The Status of IDS Assets

Concept & Technology Development Phase	Capability Development and Demonstration Phase	Production and Deployment Phase
Vertical Recovery & Surveillance Aircraft 	Multi-Mission Helicopter 	Maritime Patrol Aircraft 
Maritime Security Cutter, Medium (WMSM) 	VUAV Eagle Eye 	Maritime Security Cutter, Large (WMSL)
Maritime Patrol Coastal (WPC) 		Maritime Patrol Boat (WPB) 
Long Range Interceptor 		Short Range Prosecutor 

Maritime Security Cutter, Large (WMSL)

National Security Cutter [Delivery 2007 – 2013]

Characteristic

Length	421’
Speed	29 kts
Range	12,000 nm
Endurance	60 Days
Propulsion Plant	2 Diesel Engines, 1 Gas Turbine
Ship Control	Third Generation Integration
Crew	120-140 Depending on Mission
Engine Room	State of the Market Automation
Operating Days/Year	200-220
Crew Quarters	4-Person Staterooms
Classroom	Equipped with Computers
Small Boat Launch	Stern Launch with One Person
Air Assets Embarked	Configurations: 2 MCH, 1 MCH and 2 VUAV, 4 VUAV

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Maritime Security Cutter, Medium (WMSM)

Offshore Patrol Cutter (OPC)

Characteristic	
Length	341’
Speed	22 kts
Range	9,000 nm
Endurance	45 Days
Propulsion Plant	2 Diesel Engines / Bow thruster
Ship Control	Third Generation Integration
Crew	94
Engine Room	State of the Market Automation
Operating Days/Year	200-220
Crew Quarters	Staterooms
Classroom	Yes, Equipped with Computers
Small Boat Launch	Stern Launch with One Person
Air Assets Embarked	Configurations: 2 MCH, 1 MCH and 2 VUAV, 4 VUAV

Maritime Patrol Boat (WPB)

123' Patrol Boat (Legacy 110' SLEP) [Delivery 2004–2010]

Enhanced Bridge

- 360-degree view
- Deck area nearly doubled
- Centralized Alarm and Monitoring System
- Portable Bridge Wing Controls

Enhanced C4ISR Suite

New Deckhouse

- Staterooms allow dual-gender crew
- Admin office with medical triage area
- Crewmembers relocated from noisy aft berthing area

Performance Enhancements

- Larger Rudders
- More Efficient Propellers
- Improved Engine Controls
- Machinery Monitoring

13-Foot Stern Extension with ramp

Short-Range Prosecutor

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Maritime Patrol Coastal (WPC) Characteristics/Performance

Overall Length: 147 ft

Propulsion: (2) 5080 BHP Diesels

Displacement, Full Load: 270 LT

Range: 5000+ NM

Max Speed: 30+ knots

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Surface Implementation: Summary

Maritime Security Cutter, Large (WMSL)

- Funding in FY04 and FY05 request provide design and development of WMSL lead ship and building second WMSL.
- Startfab for this first-in-class occurred on 9 September 2004, with the keel laying to follow, in April 2005. The anticipated date of delivery for the lead ship will be the second quarter of 2007.
- Naval Operational Capacity (NOC) and DHS capability incorporated into design.

Maritime Security Cutter, Medium (WMSM)

- Congress funded in FY04 appropriations due to heightened operational tempo of the Coast Guard and the need to meet an expanding mission portfolio with increasingly deteriorating fleet assets.
- The start of the design and final requirements work for the 341-foot medium endurance cutter contract signed June 2004
- Accelerated the launch by approximately three years.
- Potential for synergy with LCS (Littoral Combat Ship).

Surface Implementation: Summary

Maritime Patrol Coastal (WPC)

- Initiated Concept and Preliminary design to assess composite hull; expectation of reasonable period of time to demonstrate the suitability and performance of the material in a marine environment before the entire class is built of same material.
- As a result of continued deterioration of the material condition of the Island Class 110-foot patrol boats, the decision was made to advance capabilities for the design and development of the WPC to replace existing 110-foot patrol boats.
- Goal is to accelerate WPC delivery in 2006

Maritime Patrol Boat (WPB)

- Currently eight cutters under contract; hulls 9-12 are under active discussion.
- MATAGORDA, METOMPKIN, PADRE & ATTU delivered; 4 hulls at Bollinger (VASHON, NUNIVAK, MONHEGAN & MANITOU).
- Challenges faced include the quality of the product, the Short Range Prosecutor, TEMPEST equipment, the hull paint, and the post delivery maintenance availability (PDMA).

Air Implementation: Summary

HH-65

- Re-engining to restore safe & reliable operations
- ICGS selected Turbomeca as the supplier
- 1st re-engine helo delivered Oct 06
- Commandants goal re-engine all helo's in 2 years
- Long-term plan is to convert HH-65 to MCH

HH-60J

- HH-60 Legacy upgrades include new avionics, radio, navigation, and sensor packages.
- 8 MH-68 Stingray leased for assignment to Helicopter Interdiction Tactical Squadron Ten (HITRON)

Air Implementation: Summary

Maritime Patrol Aircraft (MPA)

- Delivery of 2 CASA in early 2007, (mission mods late 2006)
- Ongoing effort to determine optimal mix of HC-130 and the CASA to meet the overall system requirements

HC-130J

- 6 C-130Js at APO Elizabeth City
- Missionization of C-130J moving to Deepwater
- Fully missionized by 2007
- 2 interim missionized in 2004

Eagle Eye (VUAV)

- Completed successful PDR
- VUAV Design and development costs funded in FY04; FY05 request includes purchase of two VUAVs
- Current schedule project testing through mid-2007, Initial Operational Capability (IOC) Spring 2008

C4ISR Implementation: Summary

Legacy Cutter Upgrades

- SIPRNET & Classified LAN:
  - WMEC 270 – 12 complete, 13 in all
  - WMEC 378 – 6 complete, 2 more scheduled complete Sept 04, 9th to be complete Oct 04, 3 added to Deepwater contract
  - WMEC 210 –Started Sept 04

Legacy Shore Upgrades

–SIPRNET & Classified LAN

- *CAMSLANT, Complete*
- *CAMSPAC, Complete*

Maritime Domain Awareness Center ribbon cutting April 2004

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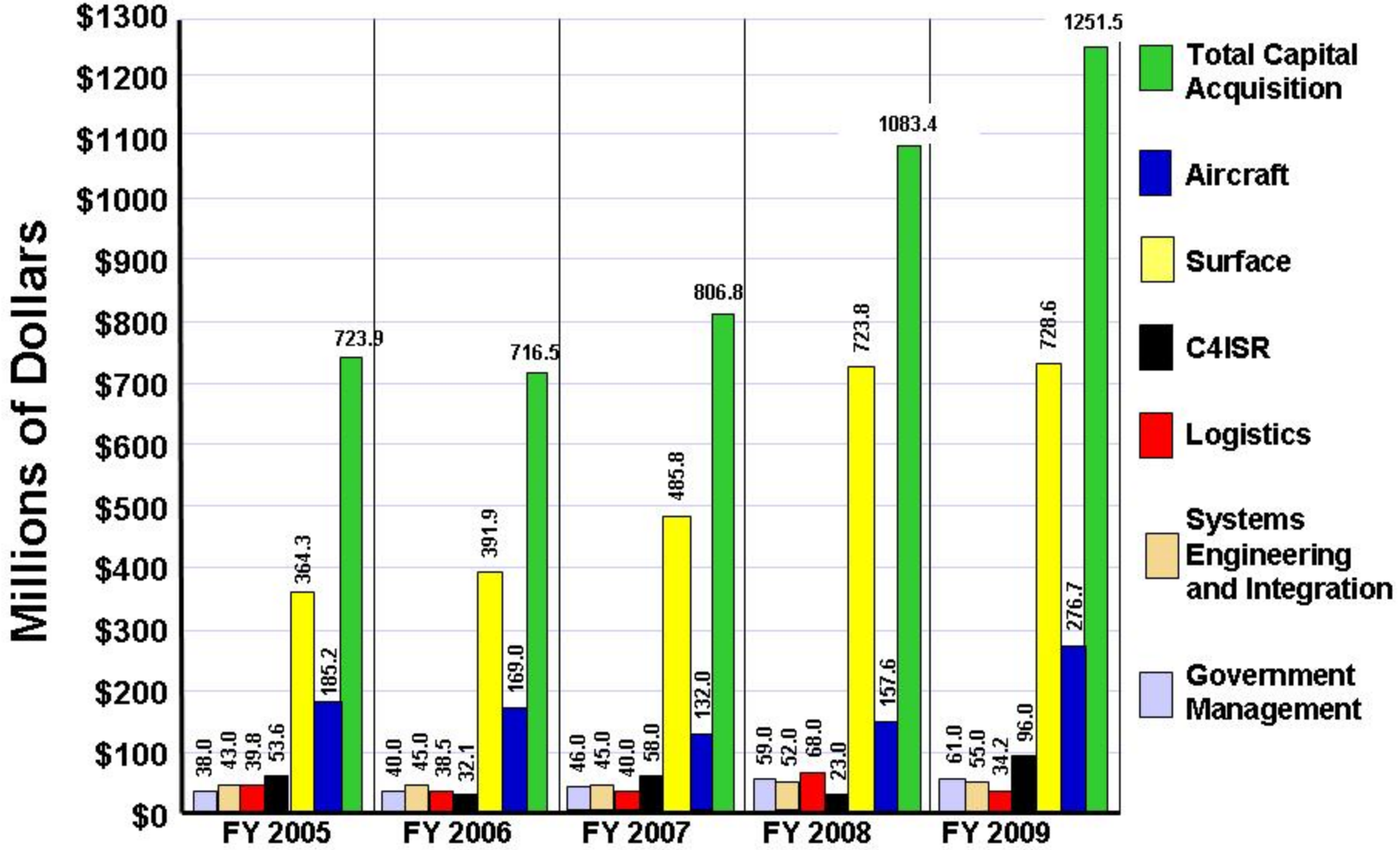
Future Year Homeland Security Plan (FYHSP)

Projected FY05-FY09 IDS BUDGET PLANS



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Deepwater and Port Security

- Deepwater's mobile, multimission platforms are ideally suited for the wide range of homeland security operations encountered in ports, waterways, and coastal areas.
- Deepwater's more capable cutters will be important players in the screening and targeting of vessels before they arrive in U.S. waters, onboard verification through boardings, and, if necessary, enforcement-control actions—more quickly, safely, and reliably.
- In the context of maritime homeland security, particularly in ports and coastal areas, one of Deepwater's most significant capability enhancements will be its robust C4ISR system.

Conclusion

- When Deepwater is fully implemented, our cutters and aircraft will no longer operate as relatively independent platforms with only limited awareness of their surroundings in the maritime domain.
- They will have improved capabilities to receive information from a wide array of mission-capable platforms and sensors.
- This will enable them to share a common operating picture as part of a network-centric force operating in tandem with other cutters, boats, and both manned aircraft and unmanned aerial vehicles—as well as with the U.S. Navy.
- A true force multiplier in homeland security and homeland defense missions.

Visit the IDS Web Page for latest Developments

Address http://www.uscg.mil/hq/g-a/deepwater/

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Integrated Deepwater System

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United States Coast Guard

SHOWCASING THE NEW MARITIME DOMAIN AWARENESS CENTER (MDAC)

Admiral Thomas H. Collins, Commandant of the U.S. Coast Guard, joined New Jersey Congressmen Jim Saxton and Frank LoBiondo to assist representatives from Lockheed Martin and Northrop Grumman during the ribbon-cutting ceremony opening the Maritime Domain Awareness Center (MDAC) at the Lockheed Martin facilities in Moorestown, New Jersey on Friday, April 23, 2004.

The new $9.4 million MDAC is a 46,000-square foot state-of-the-art facility designed to develop, test, and integrate assets and systems being produced to support the Coast Guard's Integrated Deepwater System (IDS) and other Homeland Security programs. One of nine labs in the Maritime Systems Engineering Center (MSEC), the MDAC facility can perform development, integration, installation, checkout, and acceptance testing of C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and

NEW TO THE PROGRAM?

The Integrated Deepwater System is critical to the Coast Guard's future and to America's ability to safeguard our homeland and maritime security for generations to come. Learn more about the IDS Program.

INTERESTED IN THE STATUS OF THE IDS PROGRAM?

Keep up-to-date on the IDS Program by checking out our Recent Milestones and the planned phases for Deepwater assets.

IN THE NEWS...

RAND Study: The U.S. Coast Guard's Deepwater Force Modernization Plan: Can It Be Accelerated? Will It Meet Changing Security Needs?

Check us out: www.uscg.mil/deepwater